SECTION II.—GENERAL METEOROLOGY.

PAPERS ON METEOROLOGY AS A SUBJECT FOR STUDY.

HOW METEOROLOGICAL INSTRUCTION MAY BE FURTHERED.

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There surely ought no longer to be any need of arguments to prove that meteorology deserves a far more prominent place in our schools and colleges than it has yet been given. The subject is naturally and inherently vital and interesting. Everyone is, in a sense, a born meteorologist, or at least thinks himself such. From early youth, all of us are observers of current weather. Day by day, more or less unconsciously, we make our rough non-instrumental weather observations, and on them we base our own imperfect daily forecasts. The weather affects everyone, whatever his occupation. The physical experiments in nature's great laboratory of the atmosphere go on all around us and above us. No one can be unconscious of them. No one is wholly unaffected by them.

Perhaps this universal familiarity with ordinary meteorological phenomena is, in reality, one of the most potent reasons why meteorology is not more widely studied. Familiarity, here as elsewhere, breeds a certain degree of contempt. People are so accustomed to watch the weather, and so much in the habit of making it a topic of idle conversation, that a serious study of it may not seem to them worth while. A few years since, a highly educated college woman said to the writer: "You have a very difficult subject to teach. People, generally, do not care to hear about things which they think that they already know." The remark gave a distinct shock. It was not a comforting one for a teacher of meteorology to hear. Yet there was undoubtedly much truth in it. It probably expresses a feeling which is widespread, and which must work as a considerable handicap to the extension of meteorological teaching. There is little to be gained by saying that such a view is foolish and narrow minded. It is obviously that. But if it really expresses a state of mind which exists, it must be reckoned with.

There is no subject which, in the hands of a good teacher, can be made more interesting than meteorology; none that gives better training in scientific observational methods; none that develops more logically. It is this gradual development of the subject, when its various subdivisions are systematically arranged and properly coordinated, which is an unfailing source of inspiration to the good student. From the consideration of temperature and its distribution, through pressure and winds and then on to rainfall, there is a natural sequence of cause and effect, increasing in interest at each step, which can not easily be matched in other branches of human knowledge. Meteorology, when properly taught, is not a series of rough blocks, loosely thrown into a pile. It is rather a set of smoothly hewn and closely fitting blocks, held together by the cement of interdependence and correlation, forming a complete, systematic and beautiful whole. To present meteorology as a series of fragments thrown down in haphazard fashion is to do the subject the greatest injustice and to hinder its advancement.

It is the writer's personal view that to set forth elaborate outlines of desired courses of instruction and to try to force these outlines on those who are anxious to teach is not the best method of furthering meteorological education. Such syllabi are more likely to repel than to attract would-be teachers. It is, of course, true that suggestions as to outlines from those who have already had experience in teaching should always be welcomed by others who lack such experience. But, in the long run, the man or the woman who slavishly adopts some one else's outline is not showing the true spirit of the best teacher. Each teacher should develop for himself what his own qualification and his own interests best fit him to do, and what best meets the demands and needs of his students.

Two things are needed: There must be united effort on the part of all those who are already in a position to give instruction in meteorology to send out students who will, in their turn, carry on that instruction. And, secondly, as meteorology has at present a recognized place in very few of our colleges and universities, teachers of physics, of geology, of geography, and of other sciences, who have any interest in meteorology, should make it their business to develop meteorological courses as a part of their own work. The first thing necessary is the interest, and the willingness to do the pioneer work. This will lead to the acquirement of the necessary knowledge. A short elementary course once established in connection with some other subject will soon lead to a demand on the part of the students, for more advanced instruction along the same lines. Thus will well-organized departments of meteorology and climatology gradually come into being.

College presidents are not in the habit of welcoming elaborate schemes for the establishment of courses in new subjects, especially when these courses involve the appointment of new instructors and the purchase of laboratory equipment. But if the demand for such instruction grows up within the walls of the institution from its own students, who have been inspired by good elementary teaching to desire more advanced instruction, then the presidential attitude is almost certain to be hospitable.

Let those who are already teaching meteorology, or who are able to establish new courses in that science, put their very best efforts into that teaching, to make it as supremely interesting and vital as it ought to be and can be made. Then their students who go out to teach, even if their own special field be physics, or geology, or some other science, will, some of them, somehow, find a way to lay the foundations of elementary courses in meteorology. And thus, gradually, without any flourish of trumpets, and without any widespread educational campaign, meteorology will come into its own.